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ABSTRACT

Relationships were studied between classroom racial balance (the evenness with which minority group students are distributed over classes in a grade) and the interracial attitudes of grade 3 students. Students took three attitude tests designed to measure different components of children's interracial attitudes: the Sociometric Choice Measure, the Classroom Preference Test, and The People Test. On the Sociometric Choice Measure, students most often nominated peers of their own race; on the Classroom Preference Test, students most often selected teachers and classmates of their own race; and, results for The People Test showed that both race and sex were used as criteria for the distances between stimulus figures--but that balance reduced the between figure distances deriving from sex and race. On the first two measures, too, interracial attitudes were more favorable in balanced than in unbalanced classes. Results of the study are held to show that racial balance index are clearly related to students' interracial attitudes. It is suggested that this index may prove useful as a way of differentiating between more and less successful instances of school integration. Tables of test results are appended. (RJ)

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Abstract

Relationships were studied between classroom racial balance (the evenness with which minority students are distributed over classes in a grade) and the interracial attitudes of third graders. Students took three attitude tests designed to measure different components of children's interracial attitudes. On all measures, interracial attitudes were more favorable in balanced than in unbalanced classes. Students in balanced classes showed less racial polarization in their teacher and classmate preferences, and named more other-race peers as their friends than did students in unbalanced classes. The social distances which children ascribed to figures varying by race and sex were smaller in balanced than unbalanced classes. The results suggest that the quality of school integration, as reflected by classroom racial balance, is strongly related to students' interracial attitudes.

CLASSROOM RACIAL BALANCE AND STUDENTS' INTERRACIAL ATTITUDES[1,2]

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The research reported in this paper was designed to examine relationships between the quality of school integration and students' interracial attitudes. The study was undertaken in an attempt to resolve the conflicting findings of earlier research concerned with the question of whether school desegregation is related to interracial acceptance.

As part of a long-term research effort to develop measures of children's school-related attitudes, two earlier studies had tested the racial attitudes of primary grade children in segregated and nonsegregated schools. In one study,school desegregation was related to more favorable interracial attitudes (Koslin, Amarel, and Ames, 1969). In the second study, conducted with a highly similar student body and similar tests (Koslin, Koslin, Cardwell and Pargament, 1969), no such relationship was found.

These discrepant results suggested that school desegregation may result in widely different attitudinal outcomes as

a function of the quality of the desegregated environment. This point of view is very similar to that expressed by Pettigrew in reviewing the Civil Rights Commission's analysis of the Coleman Data (Pettigrew, 1969, pp. 74-75):

> The Commission Report. . . makes a crucial distinction between a merely desegregated school and an integrated one. . . . Desegregation involves only a specification of the racial mix of students. . . . It does not include any description of the quality of the interracial contact. Merely desegregated schools can be either effective or ineffective, can boast genuine interracial acceptance or intense interracial hostility. . . . Desegregation, then, is a necessary but not sufficient condition for integration, for integration involves in addition to racial mix a climate of interracial acceptance.

In short, as the conflicting data seemed to indicate, a desegregated school does not necessarily constitute an integrated environment.

In order to test the hypothesis that it is the quality of school integration rather than the mere desegregation or racial mixing of students which affects students' interracial attitudes, an independent index of the quality of integration was needed. The index which was devised to measure the extent to which schools are integrated rather than desegregated is

based on the distribution of minority students across classes within a school.

It is widely known that schools with racially mixed student bodies differ markedly in the ways in which students of each race are assigned to classes. In some schools the students who constitute the minority are distributed fairly evenly among the classes at each grade level. In other schools they are heavily clustered in some classes and excluded from others.

An even distribution of minority students across classes in a school may result either from random processes or from the deliberate assignment of a fixed racial proportion to each class. An uneven distribution of minority students across classrooms may possibly result from random sampling processes, but the probability of marked deviations in the proportion of minority students in classes from their proportion in the grade as a whole would be exceedingly small if governed by chance alone. Therefore, in a school with widely disparate classroom racial compositions, manipulations by the school administration (e.g., grouping policies) probably have produced the nonrandomness.

Whatever reason is offered for the grouping policy, it is likely that in a school where all classes at any given grade level are similar in racial composition, children

experience a very different "integration" from that experienced by children in a school where some classes in the grade are all white or predominantly white while others are all black or predominantly black. However "reasonable" the apparent motive for the administrative manipulation (e.g., school lunch versus home lunch, short distance versus long distance bussing, low versus high reading scores, etc.) the grouping practice nevertheless helps to create a social environment in which race is salient as a criterion for categorizing people and in which the opportunities for varied interracial contacts are sharply constrained for the majority of students. Hence one possible index of the quality of school integration is the <u>evenness</u> with which minority students are assigned to the available classes at their grade level.

We have given the name "classroom racial balance" to this index of within-school grouping patterns. Throughout this report the term "classroom racial balance" will be used to refer specifically to the evenness of racial composition across classes within a school. The more the racial composition of each class mirrors the racial composition of the grade as a whole, the more "balanced" the classrooms. The more the racial composition of classrooms differs from the overall grade's racial composition, the more "unbalanced" the class-

rooms. Since this balance index is based solely on what a school does with minority pupils who are already in that school and is not concerned with the black/white ratio per se, a school which is 50% white and 50% black may turn out to be heavily unbalanced by classrooms, while a school which is 75% black and 25% white may turn out to be balanced.

Procedure

To test the hypothesis that the quality of school integration as reflected in the balance index affects interracial attitudes, a study was carried out in which racially heterogeneous schools were indexed as to classroom racial balance. The interracial attitudes of third grade students in these schools were assessed with three tests, and these attitude test results were related to the racial balance index.

The Schools

The study was conducted in racially mixed elementary schools in a large eastern city school district. All the district's elementary schools which could meet two racial heterogeneity requirements were included in the study. First, the racial composition of a school had to fall within the 25-75% range (i.e., schools in which one race constituted less than 25% or more than 75% of the student body were not selected.) This criterion of heterogeneity was arbitrarily selected as the lowest figure at which the sample size of the minority students in the school would be large enough to permit the

effect of interracial schooling to be studied.

The second criterion concerned the racial composition of individual classes within the school. Because of the age-appropriateness of the available attitude tests, third graders had been selected as the research population. To insure an adequate number of minority students in each class in the sample, the racial characteristics of all third grade classes in each school meeting the initial racial composition criterion were examined to determine whether there were at least two third grade groups in which the number of children of each race was not less than 25% nor greater than 75%. Five schools met both criteria and hence were included in the research.

Balance index

To construct the classroom racial balance index, the proportion of black students in every third grade class (p_b) was determined for each of the five schools in the study. The standard deviation of the distribution of p_b over all classes within the grade was calculated for each school, and constituted the balance index for that school. The standard deviation of p_b ranged from zero in the school most balanced by classes to .22 in the least balanced.

Classroom sample

Two third grade classes were chosen per school. All

classes in the sample were racially mixed (each class selected met the racial composition requirement that it be no more racially skewed than 25-75%) and comparable in terms of average IQ. The total sample size was 254, with approximately equal numbers of boys and girls and approximately equal numbers of whites and blacks. (The number of subjects varies slightly across analyses due to missing data.)

Measures of racial attitudes

Three tests designed to assess different components of racial attitude were administered to all subjects: The Sociometric Choice Measure, The Classroom Preference Test, and The People Test.

(1) Sociometric Choice Measure. The first attitude test is a traditional sociometric instrument. Subjects are asked to write the names of the three classmates with whom they play most often in school, and to write the names of the three classmates whom they would most like to invite to a birthday party at their house. The sociometric scale is scored by calculating the percent of black children chosen out of the total choices made. High scores indicate a high percentage of blacks chosen. This information is used to determine the extent to which peer nominations are related to race. Hence, the sociometric scale measures social behavior relevant to children's racial attitudes.

(2) Classroom Preference Test. The second attitude measure, the Classroom Preference Test, is a semidisguised measure of children's racial preferences for classmates and teachers.

The test consists of 18 sketches of classroom scenes which vary systematically in the activity portrayed (three activities are shown), in the race of teacher (two variations: black and white), and in the racial composition of pupils (three variations: all white, all black, racially mixed). The sketches are organized into nine pairs to permit all possible comparisons between the different racial compositions, with classroom activity counterbalanced. The pairs of sketches are arranged so that on any given page two of the six racial compositions appear, each embedded in a different classroom activity. In some comparisons teacher race is held constant while pupil race and classroom activity vary. In other pairs pupil race is held constant while teacher race and classroom activity vary. As each pair of pictures is presented, students are asked to indicate (by appropriate pencil marks) which class they would prefer to be in.

The test is scored by calculating how often each racial composition is preferred over others.[4] Where teacher race varies, the score is the number of times the white teacher is preferred. Scores range from zero to three with

high scores indicating consistent preference for the white teacher. Where student race varies, consistent preferences for white classes receive a score of three, consistent preferences for mixed classes receive a score of two, and consistent preferences for black classes receive a score of one. Where subjects make logically inconsistent choices their data are not included in the analysis of classmate racial preferences.[5]

(3) The People Test. The third attitude measure, The People Test, is a nonverbal, disguised, and subtle measure of children's constructs concerning the normative cognitive-affective social distance between different "types" of people. The method essentially involves asking students to make judgments concerning the appropriate distance at which people should be placed from one another. It is assumed that in making these judgments the child transforms the cognitive-affective distinctions he has learned to draw between people into geometric distances. Two sets of judgments are asked for: in one set, children judge the distance between themselves and others; in the second set, they judge the distance between pairs of people who differ by race, by sex, or both. These latter distances represent the students' understanding of the normative social distinctions which are ordinarily made in our culture, i.e., the generally shared or socially standardized social distance between the sexes

and races. The former distances (between the child himself and others) can be thought to tap predominantly personal-affective distance and are closer in meaning to Bogardus' concept of social distance (Bogardus, 1933).

The test employs simple line sketches of children as the stimulus figures. The figures are of white girls, white boys, black girls and black boys. Each of these stimulus types is represented by two alternative drawings which differ in arm position, hair style and clothing (designed as random variations of the stimulus type to introduce extraneous cues). There is one other stimulus figure: a raceless and sexless stick figure which is used as a representation of the child who is taking the test ("self" figure).

The entire set of figures is organized into a series of paired comparisons. Each pair (e.g., a white girl and a black girl) is presented on a separate page. Over the course of the ten pages comprising the test booklet, every type of stimulus figure is paired with every other.

To prevent subjects from mixing up pairs, combining the wrong figures, and confusing one comparison with other comparisons, the test booklet is organized in the following way. In each visual field (i.e., on every page) one stimulus figure is printed near the left side of the page in a permanent position. The other figure of the pair is printed on a gummed tab which is clipped to the page. The tab can be

detached by the student and then pasted permanently onto the page. Students are instructed that if the figures "belong together" or "go together" or "like to be near each other," they should be pasted close together; if they do not, they should be pasted far apart. The datum obtained from each page is the centimeter distance between the two figures (range 3 to 24 cm). Subjects who place the tab in the same page position on five or more consecutive pages are classified as perseverators and their data are excluded from all analyses of this instrument.

Measure of Socioeconomic Status

In view of the important relationships between socioeconomic background and social attitudes, a measure was obtained of the relative socioeconomic status (SES) of each student in the sample. The socioeconomic measure was a brief questionnaire, similar to the one used by Coleman (1966). Students were asked whether or not their families owned each of a number of possessions, such as a vacuum cleaner, a dictionary, etc. A student's SES score was the proportion of questions which he answered affirmatively.

Results

Three-factor analyses of covariance were carried out for the students' responses to each of the attitude measures, with classroom racial balance, student race, and student sex as the three factors, and with student SES as the covariate.[6]

The racial balance factor was constituted by categorizing the schools with the two lowest and the three highest balance indices as "balanced" and "unbalanced," respectively. This grouping reduced the likelihood that uncontrolled school factors would affect interpretations of the results.

After constituting the two levels of balance, an analysis was carried out to determine whether the proportion of black students was comparable in the balanced and unbalanced samples. (If it were not, the confounding of balance and racial composition would make interpretation of the results difficult.) There were no differences between balanced and unbalanced classes in the proportion of black students (Fisher exact probability = .27, n.s.). Both the balanced and the unbalanced samples were found to include classrooms with low to high proportions of blacks (25% to 68% in the balanced classrooms; 34% to 75% in the unbalanced classrooms). In short, a wide range of racial proportions is represented within the group of balanced classes and within the group of unbalanced classes, but there is no difference in racial proportions between the two levels of balance.[7]

Relationships among the independent variables are summarized in Table 1. The table shows a correlation of

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r = .25 between school balance and SES. Since this correlation is not high (not significantly different from zero), balance and SES are relatively independent in the sample employed in this study. As Table 1 shows, the same amount of independence exists between all the independent variables.

Although SES and school balance are not significantly correlated with each other independently, it is nonetheless possible that SES might have some effect on one or more of the dependent measures. Consequently, to control for possible effects of socioeconomic class, the measure of SES is employed as a covariate in all analyses. All mean scores reported in the results have been adjusted for the effects of covariation.

Sociometric scale

An analysis of covariance of the sociometric choice data (Table 2) shows a main effect for race. Children in all

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schools nominate mostly classmates of their own race. Black students choose nearly two-thirds ($\bar{X}$ = 64%) black peers while white students choose fewer than one-third ($\bar{X}$ = 30%) black peers.

Table 2 also indicates that classroom racial balance interacts with sex to affect sociometric choice. Boys nominate a higher proportion of blacks in unbalanced classrooms

($\bar{X}$ = 53%) than in balanced ($\bar{X}$ = 45%). For girls, the opposite is true; they name more blacks in balanced ($\bar{X}$ = 52%) than in unbalanced classrooms ($\bar{X}$ = 39%). This interaction is due almost entirely to the fact that the peer nominations of two groups--black boys and white girls--are sensitive to the balance-imbalance factor. For these two groups the balanced environments result in a marked increase in the nomination of peers of the other race. White girls in balanced classes nominate a higher proportion of blacks ($\bar{X}$ = 36%) than white girls in unbalanced classes ($\bar{X}$ = 18%). Black boys choose a larger proportion of white peers in balanced classes ($\bar{X}$ = 44%) than black boys in unbalanced classes ($\bar{X}$ = 29%). The peer choices of the two remaining groups are unaffected by the balance factor (white boys $\bar{X}$ = 32% blacks balanced versus $\bar{X}$ = 35% unbalanced; black girls $\bar{X}$ = 66% blacks balanced versus $\bar{X}$ = 63% unbalanced).

Classroom Preference Test

The Classroom Preference Test provides data for separate analyses of students' preferences for white or black teachers and their preferences for white or black classmates.

The covariance analysis of student preferences for white or black teachers is shown in Table 3. A significant

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main effect for race reflects the fact that whites choose

white teachers most of the time ($\bar{X}$ = 2.70) while black students choose black teachers most often ($\bar{X}$ = 1.93). However, the significant race by balance interaction in Table 3 shows reduced polarization in the balanced classes. Black students in balanced classes choose more white teachers ($\bar{X}$ = 2.02) than black students in unbalanced classes ($\bar{X}$ = 1.83). White students in balanced classes choose more black teachers ($\bar{X}$ = 2.58) than white students in unbalanced classes ($\bar{X}$ = 2.82).

The covariance analysis of student preferences for white or black classmates is presented in Table 4. A

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significant main effect for race occurs because whites choose mostly white classmates ($\bar{X}$ = 2.25) while blacks choose mostly black classmates ($\bar{X}$ = 1.61). However, even though students in all schools prefer classmates of their own race, the polarization tends to be somewhat less extreme in balanced than in unbalanced classes ($\bar{X}$ = 1.71 for balanced blacks versus $\bar{X}$ = 1.52 for unbalanced blacks; $\bar{X}$ = 2.22 for balanced whites versus $\bar{X}$ = 2.29 for unbalanced whites). This movement of mean scores for black and white subjects toward the middle of the scale in balanced classes is due to the tendency of

balanced subjects of both races to choose more sketches showing racially homogeneous classes of the other race than do unbalanced subjects. Sketches showing racially mixed classes are not more popular in balanced than unbalanced classes.

Though the race by balance effect is not significant in Table 4, there is a significant interaction--as with the sociometric data--for sex with balance. Boys are more pro-black in unbalanced classes ($\bar{X}$ = 2.12 for balanced versus $\bar{X}$ = 1.78 for unbalanced), while girls are more pro-black in balanced classes ($\bar{X}$ = 1.79 for balanced versus $\bar{X}$ = 1.97 for unbalanced). This interaction is due chiefly to the black boys choosing many more whites in balanced ($\bar{X}$ = 2.07) than unbalanced ($\bar{X}$ = 1.36) classes. These effects occur (Table 4) regardless of the race of the teachers portrayed in the stimulus materials.

The People Test (Social distance measure)

Two analyses were carried out for the social distance data, one analysis for distances which subjects place between the stick figure representing themselves (self figure) and each of the target figures, and another analysis for the distances between each pair of target figures excluding the self.

Results of the self-target covariance analysis are

reported in Table 5. A significant main effect exists for

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Insert Table 5 about here

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balance: subjects in balanced classes place the self figure closer to each of the four target figures than subjects in unbalanced classes ($\bar{X}$ = 12.49 cm balanced versus $\bar{X}$ = 14.23 cm unbalanced). The significant race by target figure interaction reflects the fact that white subjects place the self figure closer to the white boy ($\bar{X}$ = 12.21 cm) and white girl ($\bar{X}$ = 12.15 cm) than to the black boy ($\bar{X}$ = 14.65 cm) and black girl ($\bar{X}$ = 14.90 cm), while black subjects do just the opposite: they place the self figure closer to the black boy and girl targets ($\bar{X}$ = 12.60 cm and $\bar{X}$ = 12.06 cm) than to the white boy and girl stimulus figures ($\bar{X}$ = 13.08 cm and $\bar{X}$ = 14.69 cm). The results for sex parallel those for race. A significant sex by target figure interaction results from girls placing the self figure closer to the white and black female target figures ($\bar{X}$ = 11.85 cm and $\bar{X}$ = 12.81 cm) than to the white and black male stimuli ($\bar{X}$ = 12.86 cm and $\bar{X}$ = 15.21 cm) while the boys do just the opposite, placing the self figure closer to the white and black boy ($\bar{X}$ = 12.43 cm and $\bar{X}$ = 12.04 cm) than to the white and black girl ($\bar{X}$ = 15.00 cm and $\bar{X}$ = 14.16 cm). In short, both sex and race are clear criteria for distance judgments.

The significant balance by target figure by sex interaction (Table 5) occurs because subjects place themselves further from target figures of the opposite sex in unbalanced than in balanced classes. In Table 6 the mean distance that

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girls place between the self figure and each target figure has been subtracted from the distance that boys place between the self and that target. Inspection of the table shows that the absolute difference between male and female students' self-target figure distance scores is always greater in unbalanced than balanced classes. Thus, the distance judgments of the male and female students differ less in balanced than in unbalanced classes.

Classroom balance has a significant effect (Table 7) on

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the distance which children place between pairs of target figures which do not include the "self." Figures are placed closer to each other by students in balanced ($\bar{X}$ = 11.83 cm) than in unbalanced ($\bar{X}$ = 13.12 cm) classrooms. The differences between balanced and unbalanced classrooms are largest for those comparisons where both the race and the sex of the figures differ: the white girl target paired with the black

boy target ($\bar{X}$ = 14.14 cm balanced versus $\bar{X}$ = 17.47 cm unbalanced) and the black girl target paired with the white boy target ($\bar{X}$ = 15.11 cm balanced versus $\bar{X}$ = 17.72 cm unbalanced).

The covariance analysis (Table 7) of distances between all pairs of target figures which do not include the "self" also shows a main effect for the different comparisons. As is evident in Figure 1, distances are smallest where only the

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Insert Figure 1 about here

sex of the two figures differs, intermediate where only the race of the two figures differs, and largest where both the race and the sex of the two figures differ. There is strikingly high agreement across groups concerning the representation of normative social distance, as is apparent in Figure 1. Students taking the test appear to have quite similar concepts concerning the standardized (socially shared) social distances between children varying by sex and race.

One possible concern in interpreting the distance data is that blacks and whites, or males and females, may differ from each other in the meaning which they attach to various distances, making comparisons between these groups difficult or even impossible. Figure 1 strongly suggests that males, females, whites and blacks use the response scale similarly.

No group of children (white males, white females, black males, black females) consistently has the smallest or largest mean distance scores. The marginally significant triple interaction in Table 7 reflects the fact that the four groups switch their rank order position with respect to mean distance score from comparison to comparison. The only hint of a systematic trend involves the black boys, whose mean distance scores take the lowest rank four out of six times.

Discussion

The results of this study consistently reveal a high level of racial polarization among third graders. On all measures, however, there is less polarization in balanced than unbalanced classrooms, with the balance effect frequently moderated by the sex of subjects.

On the Sociometric Choice Measure, students most often nominate peers of their own race. However, black boys and white girls name more peers of the other race and fewer of their own race in balanced than in unbalanced environments. In view of the differing sex-role definitions in black as opposed to white culture, it is not at all surprising that the data should show sex and race interacting with classroom balance in determining friendship choices.

On the Classroom Preference Test, students most often select teachers and classmates of their own race. However, students in balanced classes choose more teachers of the

other race and fewer of their own race than children in unbalanced classes.

Students also tend to choose more classmates of the other race in balanced than in unbalanced classrooms, though these latter differences are not statistically significant. The attenuation of the balance effect for the classmate preferences is probably due to the visual complexity of the task. Since ten pupils are portrayed per sketch, the student needs to process far more information when comparing two student groups for the classmate preference section of the test than when comparing two individual teachers for the teacher preference section, especially when one of the sketches portrays a racially heterogeneous class.

Results for The People Test show that both race and sex are used as criteria for the distances placed between stimulus figures, but that balance reduces the between-figure distances deriving from race and sex. Subjects consistently place the self-figure closer to target figures of their own race and sex than to targets of the other race or sex, but the self-target distances are always smaller in balanced than unbalanced environments. Similarly, in target figure comparisons which do not include the self the largest distances are found for those comparisons where the figures differ both by race and by sex, reflecting the cultural reality that racial discrimination imposes especially severe restric-

tions on social interactions between males and females who differ in race. It is noteworthy that target figure comparisons involving both race and sex differences are the ones which show the largest reduction of distance in the balanced environments. The finding that sex is less salient as a criterion for the distance placed between self and target figures in balanced than in unbalanced environments further suggests that the more racially tolerant social atmosphere of the balanced classes makes it possible for students to be less "on guard" with respect to sex.

This brief summary of the results of the study indicates fairly consistent findings across instruments. Yet, as the following paragraphs will show, the three tests used in the study are designed to measure rather distinct components of racial attitudes and also differ in the extent to which they are open to compliance effects.

The Sociometric Choice instrument provides a simple measure of attitudinally relevant behavior. Since this measure is administered first in the test battery, before any of the other tests are seen, there have been no racial cues provided which might lead subjects to give socially compliant responses. Consequently, the peer nominations should be accurate with regard to their racial character.

The Classroom Preference Test, the measure of children's racial preferences for teachers and classmates,

provides an index of the effect of prevailing norms, ideologies, and stereotypes--as well as personal experience--on children's personal preferences concerning the racial character of their social surround. While the embedding of racial variation within different activities does provide some degree of disguise, the racial character of the test would probably be evident in an environment in which race is salient. For this reason the Classroom Preference Test is probably the test in the battery most open to compliance effects.

The People Test measures social distance constructs both with respect to the normative cognitive-affective distances between people who differ by race or sex or both and with respect to the more affect-laden personal distances between the student and others. The test is quite subtle and not easily subject to compliance effects. Since the figures vary simultaneously by race and sex, any attempt by students to appear racially tolerant is likely to cause distortion in the social distances associated with sex. If, for example, children tried consistently to follow a rule to "always put a black and a white person as close as or closer together than two black people or two white people," they would be forced to drop sex differentiations and there would be no clear relation in the data between sex of target and distances. However, it seems clear from Figure 1 that subjects have responded to both the sex and race dimensions in the stimuli.

While it is theoretically possible for subjects to fake The People Test in such a way that the distances would reflect the two-dimensional character of the stimuli, it is not likely that this would actually happen. In order to fake the test successfully, the child would need to derive the following complex rule: "Put a black and a white person as close together as or closer together than two black or two white people, being careful to put same sex figures nearer to each other than opposite sex figures." It seems unreasonable to expect third graders to derive and consistently follow such a complex rule.

In summary, the three instruments serve different purposes in the measurement of attitude. One measures reported behavior, the second measures personal preferences, while the third measures normative and personal social distance. Moreover, the instruments differ markedly in rationale, format, degree of disguise and analytic procedure. Thus there is no reason to expect that balance should have uniform effects across measures. The fact that all three instruments were affected in fairly comparable ways by classroom balance therefore provides strong support for the findings. For example, in view of the consistent trend in the results, it is unlikely that the teacher preference data can be explained by mere subject compliance with prevailing norms in balanced as opposed to unbalanced classes.

The results are especially impressive in view of the conservative way in which the sample was selected. The selection procedure tended to minimize the likelihood of obtaining differences between the balanced and unbalanced classes. For inclusion in the study, a school had to be no more lopsided in racial composition than 25-75% and, in each school, there had to be at least two third grade classes which were not more racially skewed than 25-75%. Of the seventeen schools meeting the first criterion only five could meet the second. Therefore, when schools in the sample are considered in the context of the city's total population of schools, all are fairly close to being balanced.

Moreover, the selection of students within each school was also conservative. By sampling only classrooms which fell within the 25-75% racial composition range, differences in racial heterogeneity between balanced and unbalanced classes were minimized. Hence, we probably selected those students who would be expected to show the <u>smallest</u> balance effect. Being able to get such consistent results with such a conservative sampling approach suggests that the effects being measured must be very powerful.

We are reasonably confident that the observed effects are not attributable to student input characteristics. The

results were controlled for SES on a subject by subject basis, and independent knowledge of the five schools suggests that the SES data are generally accurate.

The results of the study show the racial balance index to be clearly related to students' interracial attitudes, suggesting that this simple, objective index may prove useful as a way of differentiating between more and less successful instances of school integration. The findings reported here suggest that schools with balanced classrooms are likely to be characterized by lower levels of racial tension and less racial polarization than schools with unbalanced classrooms. At this point in the research program it is not possible to argue that the relationship is a causal one. It may be, for example, that racial balance is correlated with student attitudes primarily because administration and faculty attitudes have a strong influence both on grouping policies and on the racial atmosphere in a school, and not because grouping, per se, affects student attitudes.

Our intuitions, however, are otherwise. We would hypothesize that balance, per se, has at least some independent effect on children's attitudes. In the first place, in schools where race is a criterion for grouping--or appears to the children to be so--race consciousness is probably heightened. Secondly, departures from classroom balance

restrict the kinds of contacts which students are likely to have with one another, especially students who are grouped at the "top" or "bottom" of the grade. Stereotyping and mutual disdain are likely outcomes of such a social organization. At the very least, we would think that for favorable interracial attitudes to develop in schools with unbalanced classes, a concerted effort would be required by the faculty and administration to offset the polarizing tendencies which are probably inherent in an internally segregated school.

The question of causal relations between balance and attitudes remains to be explored in further research. If, as we suspect, classroom balance does influence attitudes directly, the implications for school practice seem both clear and encouraging. There are many things about a school which the administration and faculty are near powerless to control. They can hardly change the social class composition of the school, or physical plant factors, or pupil overcrowding, or the type of attitudes prevalent in the students' homes. They can, however, directly control within-school grouping policies, and our data, though preliminary, suggest that this control gives them a powerful lever on the interracial attitudes of their students.

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Footnotes

[1] An earlier version of this paper was presented to the meetings of the American Educational Research Association, Minneapolis, March 1970.

[2] The Research reported herein was supported by a grant (HD 03961) from the National Institute of Child Health and Human Development.

[3] Riverside Research Institute, 632 W. 125th Street, New York, NY 10027

[4] Previous research (Koslin, Koslin, Cardwell & Pargament, 1969) has shown that very few subjects display consistent preferences on the basis of activity; those who do are deleted from the analysis of racial preferences.

[5] It is now possible, by means of a self-checking procedure recently built into the test, to distinguish between inconsistent choices which reflect failure to understand directions and inconsistent choices which reflect an absence of stable racial preferences. At the time this study was conducted, however, such distinctions were not possible, and all inconsistent data were excluded from the classmate preference analysis.

[6] Unweighted means solutions allowed for unequal n (Winer, 1962).

[7] At the time the study was begun it was intended that racial proportion would constitute a fourth factor in the analyses, since it is possible that balance may have different effects at different levels of racial composition. However, the fact that only five schools could meet the racial heterogeneity criteria for inclusion in the study resulted in a total sample composed of too few classes to make it possible to constitute such a racial proportion factor. With only ten classes in the sample and high variability of racial composition within each level of balance, proportion effects would have been almost completely confounded with specific classroom effects.

Table 1

Intercorrelations between Independent Variables[a]

	Race	Sex	Balance	Socioeconomic Status
Race	1.00	-.08	-.20	.04
Sex		1.00	.20	.09
Balance			1.00	.25
Socioeconomic Status				1.00

Note. - [a]The independent variables were coded as follows: for race, blacks = 1, whites = 2; for sex, males = 1, females = 2; for balance, schools with balanced classrooms = 1, schools with unbalanced classrooms = 2; for SES, higher scores represent higher SES.

Table 2

Analysis of Covariance of Students' Sociometric Choices

Source	df	MS'	F
Race (A)	1	6.07	57.87**
Sex (B)	1	.05	< 1
Balance (C)	1	.01	< 1
AB	1	.06	< 1
AC	1	.19	1.83
BC	1	.44	4.20*
ABC	1	.01	< 1
Error	246	.10	

*$p < .05$

**$p < .001$

Table 3

Analysis of Covariance of Students' Preferences for White or Black Teachers

Source	df	MS'	F
Race (A)	1	32.77	41.46**
Sex (B)	1	.01	< 1
Balance (C)	1	.20	< 1
AB	1	2.02	2.56
AC	1	3.05	3.86*
BC	1	.02	< 1
ABC	1	.31	< 1
Error	245	.79	

* $p < .05$

** $p < .001$

Table 4

Analysis of Covariance of Students' Preferences for White or Black Classmates

Source	df	MS'	F
Between Ss			
Balance (A)	1	.18	< 1
Race (B)	1	15.35	23.15**
Sex (C)	1	.13	< 1
AB	1	.93	1.41
AC	1	3.35	5.05*
BC	1	.93	1.40
ABC	1	2.25	3.40
Error	105	.66	
Within Ss			
Race of Teacher Portrayed (D)	1	.39	1.44
AD	1	.10	< 1
BD	1	.33	1.32
CD	1	.56	2.03
ABD	1	.13	< 1
ACD	1	.43	1.60
BCD	1	.03	< 1
ABCD	1	.40	1.34
Error	105	.27	

* $p < .05$

** $p < .001$

Table 5

Analysis of Covariance of Self-Target Figure Distances

Source	df	MS'	F
Between Ss			
Balance (A)	1	712.55	7.76*
Race (B)	1	38.29	< 1
Sex (C)	1	8.43	< 1
AB	1	62.86	< 1
AC	1	30.41	< 1
BC	1	51.63	< 1
ABC	1	79.41	< 1
Error	241	91.86	
Within Ss			
Target figures (D)	3	42.08	< 1
AD	3	45.93	1.01
BD	3	341.82	7.52**
CD	3	391.73	8.61**
ABD	3	16.17	< 1
ACD	3	218.19	4.80*
BCD	3	12.99	< 1
ABCD	3	17.24	< 1
Error	725	45.55	

* $p < .01$

** $p < .001$

Table 6

Male Minus Female Self-Target Figure Distances by Balance[a]

	Classes	
Self-Target Comparison	Balanced	Unbalanced
White boy	.4	1.3
White girl	.1	6.1
Black boy	1.7	4.6
Black girl	.3	2.3

Note: [a]Absolute differences between adjusted means are entered in the cells.

Table 7

Analysis of Covariance of Distances between Target Figure Pairs

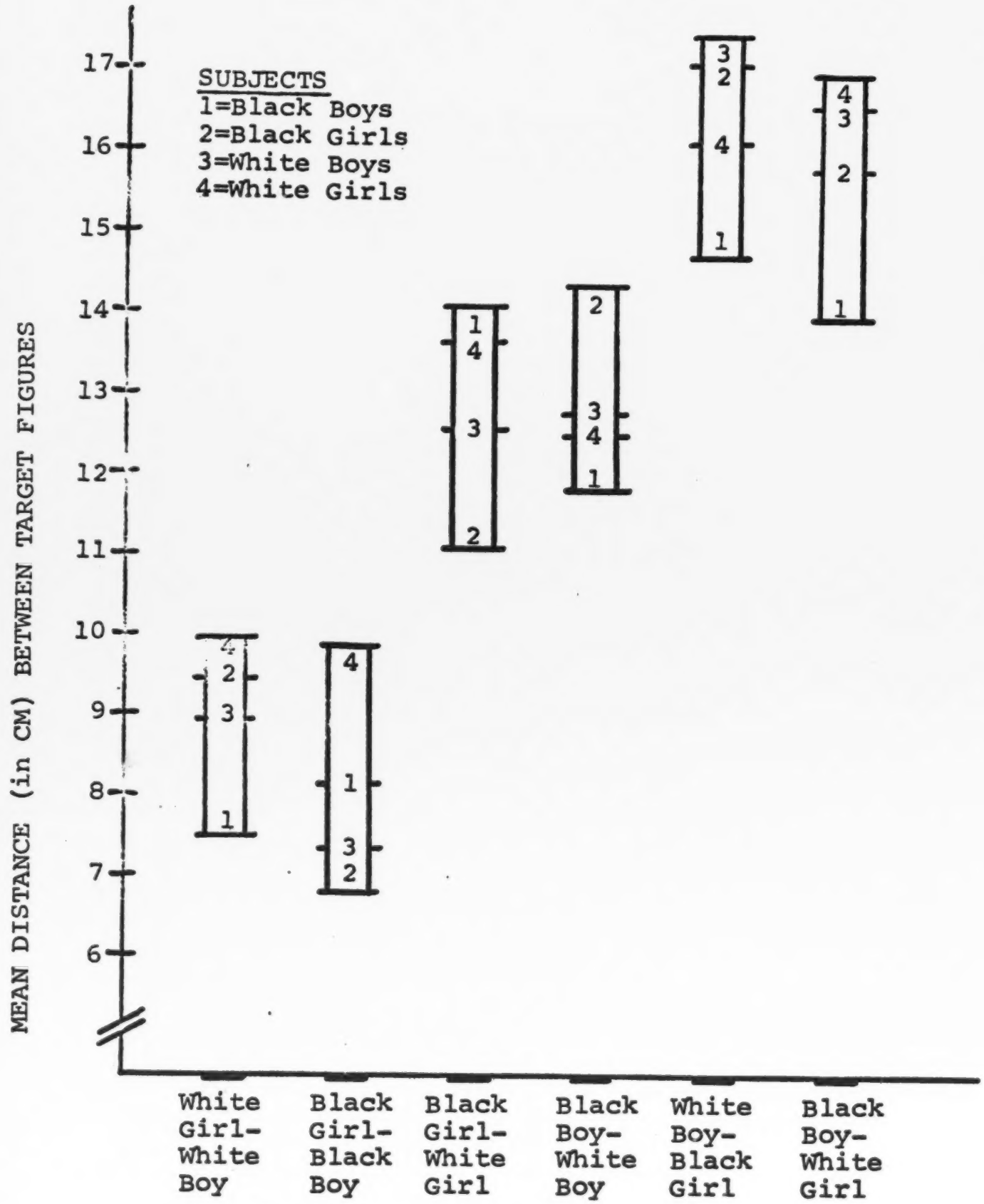
Source	df	MS'	F
Between Ss			
Balance (A)	1	502.79	6.28*
Race (B)	1	236.20	2.95
Sex (C)	1	151.04	1.89
AB	1	12.57	< 1
AC	1	.04	< 1
BC	1	1.13	< 1
ABC	1	64.34	< 1
Error	235	80.10	< 1
Within Ss			
Target figure pairs (D)	5	2407.99	49.29**
AD	5	129.56	2.65*
BD	5	30.57	< 1
CD	5	36.77	< 1
ABD	5	19.32	< 1
ACD	5	43.93	< 1
BCD	5	135.00	2.76*
ABCD	5	15.77	< 1
Error	1179	48.90	

* $p < .05$

** $p < .001$

Figure Caption

Figure 1. Distances between six target figure pairs for subjects by race and sex.


MEAN DISTANCE (in CM) BETWEEN TARGET FIGURES
17
16
15
14
13
12
11
10
9
8
7
6
SUBJECTS
1=Black Boys
2=Black Girls
3=White Boys
4=White Girls
White Girl-White Boy
Black Girl-Black Boy
Black Girl-White Girl
Black Boy-White Boy
White Boy-Black Girl
Black Boy-White Girl
TARGET FIGURE PAIRS